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Jha KN, High altitude and the eye. *Asia Pac J Ophthalmol* 1 (3) (2012) 166–169.

High altitude eye problems have a significant role to play in combat capability of our troops. Due to altered physiology at high altitude, the ocular manifestations of diseases are varied. Ocular surface disorders are more common, leading to constant redness, watering and progressive photophobia. Sometimes potentially sight threatening conditions like high altitude retinopathy and vascular occlusions can be a presenting feature. The behavior of newer procedures like LASIK, which have been permitted in certain sub group of combatants at high altitude is also an extremely important point to be considered.

The review article was based on literature search done on all publications till 2011. The authors conducted a Pubmed search for key words like high altitude, eye problems and Himalayas in varied combinations. The authors divided the ocular manifestations into short term and long term. The most common short term complications were dry eyes, photokeratitis and high altitude retinopathy. The long term complications included dry eyes, cataract, pterygium and vascular occlusions. The important point which is highlighted is the predictive value of high altitude retinopathy for cerebral edema. Medical officers at high altitude forward posts should therefore be more vigilant in handling cases of blurred vision which could be a harbinger of more sinister life threatening diseases.

Another issue raised by article is the effect of high altitude physiology on the cornea of soldiers who have undergone kerato-refractive procedures like LASIK. With revised visual standards accepting certain sub group of combatants into defense services with LASIK, this issue needs to be evaluated further. Studies done on effect of high altitude in eyes undergone LASIK have concluded that vision is reduced in immediate post-operative period.¹ Increased corneal thickness has been documented in a study done on healthy mountain climbers. The interesting finding was that people with thicker corneas were more susceptible for mountain sickness though

this could be a generalized response of an individual to hypoxia.²

The article brings out that scotopic vision is affected by high altitude though there was no effect on contrast sensitivity. The importance of acclimatization and pre oxygenation as a preventive measure cannot be over emphasized. The article has not discussed the effect of high altitude on Intra-ocular pressure. In a recently published study, it was found that the IOP rises with increasing altitude, but this could be related to the corneal swelling due to hypoxia.³

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